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EXAMINER	
ZONG, RUOLEI	
ART UNIT	PAPER NUMBER
2441	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,524	YAO, XIN	
	Examiner	Art Unit	
	RUOLEI ZONG	2441	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,8,11,13,14 and 21-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,8,11,13,14 and 21-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/3/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is responsive to the amendment filed on 09/09/2009. Claims 1,4-6,8,11,13,14 and 21-28 are pending; claims 1,4-6,8,11,13,14 and 21-28 are rejected.

Specification

1. Claim 8 is objected to because of the following informalities: "forwardings the message" in line 4-5. The examiner respectfully suggests changing to –forwarding the message--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 6, 8, 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "replacing port numbers of the message; replacing data of an application layer; or updating a signaling state." However it is not clear what substitution is.

Claim 8 recites the limitation "before receiving the message, forwardings the message to the SP according to a forwarding strategy by a network device." However it is not clear what performs receiving message. If a network device receives the message, how can the device forward the message BEFORE it receives the message?

Claim 21 is indefinite because it depends on claim 8.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 24-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claims 24-28, claims 24-28 fail to fall within a statutory category of invention. They are directed to a program itself because signal proxy SP, as disclosed in Paragraph 6 of the specification, is a logical concept. Therefore it is not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program nor a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. It is also clearly not directed to a composition of matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, 6, 11, 13, 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (Hereinafter Chen, US Patent Application Publication 2002/0021688 A1).

As to claim 1, **Chen** teaches a method, comprising:

receiving a message by a signaling proxy (SP), wherein the message has a source address and a destination address (*In FIG. 3a, a packet 30 conventionally addressed to a mobile in a foreign network has as source address 32 the IP address of CN 24; and as destination address 34 the home address of MN 28 (e.g. destination address)*, **Chen, Para. 0025; Chen, Para. 0032-0033**);

processing the message if the destination address of the message is different than a SP address and an address for which the message is intended (*changing the packet header so that the source address is the home agent address, the destination address is the Care of Address (e.g. an address for which the message is intended) and*

the header further includes a correspondent node identifier code and a mobile node identifier code, **Chen, Para. 0015; Chen, Para. 0032-0033**. *Note that usually the home agent (e.g. signaling proxy) will change the packet header in* ***Chen, Para. 0016****, therefore it is disclosed a message is proxied if destination address is not the address of SP or home agent and not the address intended*); and

sending the message (*sending message by home agent is inherently disclosed. See* ***Chen, Fig. 2a-b***).

As to claim 4, **Chen** teaches the method according to claim 1, further comprises:

replacing the destination address of the message with the address for which the message is intended; and

replacing the source address of the message with the address of the SP (*changing the packet header so that the source address is the home agent address, the destination address is the Care of Address (e.g. an address for which the message is intended) and the header further includes a correspondent node identifier code and a mobile node identifier code,* **Chen, Para. 0015; Chen, Para. 0032-0033**).

As to claim 6, **Chen** teaches the method according to claim 1, wherein processing the message comprises:

replacing the source address and the destination addresses of the message (*changing the packet header so that the source address is the home agent address, the destination address is the Care of Address (e.g. an address for which the message is*

intended) and the header further includes a correspondent node identifier code and a mobile node identifier code, **Chen, Para. 0015; Chen, Para. 0032-0033**);

replacing port numbers of the message;

replacing data of an application layer; or

updating a signaling state.

As to claim 11, **Chen** teaches an apparatus, comprising:

a receiving unit configured to receiving a message, wherein the message has a source address and a destination address (*In FIG. 3a, a packet 30 conventionally addressed to a mobile in a foreign network has as source address 32 the IP address of CN 24; and as destination address 34 the home address of MN 28 (e.g. destination address)*, **Chen, Para. 0025; Chen, Para. 0032-0033**);

a processing unit configured to process the message if the destination address of the message is different than a SP address and an address for which the message is intended (*changing the packet header so that the source address is the home agent address, the destination address is the Care of Address (e.g. an address for which the message is intended) and the header further includes a correspondent node identifier code and a mobile node identifier code,* **Chen, Para. 0015; Chen, Para. 0032-0033**. *Note that usually the home agent (e.g. signaling proxy) will change the packet header in* ***Chen, Para. 0016****, therefore it is disclosed a message is proxied if destination address is not the address of SP or home agent and not the address intended*); and

a sending unit configured to send the message (*sending unit to send the message by home agent is inherently disclosed. See* ***Chen, Fig. 2a-b***).

As to claim 13, **Chen** teaches the apparatus according to claim 11, wherein the processing unit is configured to replace the destination address of the message with the address for which the message is intended, and replace the source address of the message with the SP address (*changing the packet header so that the source address is the home agent address, the destination address is the Care of Address (e.g. an address for which the message is intended) and the header further includes a correspondent node identifier code and a mobile node identifier code,* **Chen, Para. 0015; Chen, Para. 0032-0033**).

As to claim 22, **Chen** teaches the method according to claim 1, wherein the address for which the message is intended is an address of a terminal (*COA of MN 28*, **Chen, Para. 0032**) or an address of a server.

As to claim 23, **Chen** teaches the apparatus according to claim 11, wherein the address for which the message is intended is an address of a terminal (*COA of MN 28*, **Chen, Para. 0032**) or an address of a server.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Akman (US Patent 7,146,410, B1).

As to claim 24, **Akman** teaches a system, comprising:

a signaling proxy (SP) (*Firewall/NAT Router*, **Akman, Fig. 1A, 160;** *MEGACO NAT*, **Akman, Fig. 1B, 170**) located between a terminal (*MG*, **Akman, Fig. 1A, 140; Akman, Fig. 1B, 140**) and a server (*MGC*, **Akman, Fig. 1A, 110; Akman, Fig. 1B, 110**),

wherein the SP is configured to receive a message and process the message if at least one of a VPN ID, a VLAN ID, a MPLS ID, an IP protocol type, a source address, or a source port of the message meets a strategy of the SP (*The corresponding messaging among the MGC 110, firewall 160, and MG 140 is as follows. MG [10.12.2.2] 140 sends a MEGACO Service Change message 210 to its MGC 110. The message is received by firewall/NAT 160 which is listening on a MEGACO port having an IP address of [10.2.2.50]. The firewall/NAT 160 then inspects the Service Change message and changes the IP address of the MG from [10.12.2.2] to [175.17.4.1] 220 (e.g. processing the message if source address meets a strategy). [175.17.4.1] is the IP*

address of the firewall/NAT 160 according to the private IP network 120. The change is entered in the NAT table maintained by the firewall/NAT 160. Next, the firewall/NAT 160 sends the MEGACO Service Change message 230 to the MGC 110 using the substitute IP address, **Akman, Col. 4, Line 25-53**).

As to claim 25, **Akman** teaches the system according to claim 24, wherein the SP is serially connected to the terminal and the server (**Akman, Fig. 1A-1B**).

As to claim 26, **Akman** teaches the system according to claim 24 further comprising a router, wherein the router is located between the terminal and the SP (**Akman, Fig. 1B.** *Note that Firewall / Router 160 is located between the terminal (MG 140) and SP (MEGACO NAT 170)*).

As to claim 27, **Akman** teaches the system according to claim 26, wherein the router is configured to forward the message to the SP according to a forwarding strategy (*firewall/NAT router 160 offloads all MEGACO messages entering and leaving IP network 120 to MEGACO NAT server 170 (e.g. forwarding strategy) for inspection and translation of IP addresses within MEGACO messages*, **Akman, Col. 4, Line 1-13**).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 5, 8, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Akman.

As to claim 5, **Chen** substantially teaches a method as set forth in claim 4 above.

Chen does not explicitly disclose receiving a response from an entity for which the message is intended; replacing a destination address of the response with the source address of the message; replacing a source address of the response with the destination address of the message; and sending the response.

However **Akman** teaches receiving a response from an entity for which the message is intended; replacing a destination address of the response with the source address of the message; replacing a source address of the response with the destination address of the message; and sending the response (*The MGC 110 responds with a Service Change Reply message 240 containing its IP address. The firewall/NAT 160 relays the Service Change Reply message 250 to MG [10.12.2.2] 140 completing the registration*, **Akman, Col. 4, Line 32-41; Akman, Fig. 2A**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use address replacement of **Akman** on the method

of **Chen** in order to inspect and translate control protocol messages exchanged between nodes on separate IP networks.

As to claim 8, **Chen** substantially teaches a method as set forth in claim 1 above.

Chen does not explicitly disclose before receiving the message, forwardings the received message to the SP according to a forwarding strategy by a network device.

However **Akman** teaches before receiving the message, forwardings the received message to the SP according to a forwarding strategy by a network device (*firewall/NAT router 160 offloads all MEGACO messages entering and leaving IP network 120 to MEGACO NAT server 170 (e.g. forwarding strategy) for inspection and translation of IP addresses within MEGACO messages*, **Akman, Col. 4, Line 1-13**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use address replacement of **Akman** on the method of **Chen** in order to inspect and translate control protocol messages exchanged between nodes on separate IP networks.

As to claim 14, **Chen** substantially teaches an apparatus as set forth in claim 13 above.

Chen does not explicitly disclose to receive a response from an entity for which the message is intended; and wherein the processing unit is further configured to replace a destination address of the response with the source address of the message

and replace a source address of the response with the destination address of the message.

However **Akman** teaches to receive a response from an entity for which the message is intended; and wherein the processing unit is further configured to replace a destination address of the response with the source address of the message and replace a source address of the response with the destination address of the message (*The MGC 110 responds with a Service Change Reply message 240 containing its IP address. The firewall/NAT 160 relays the Service Change Reply message 250 to MG [10.12.2.2] 140 completing the registration*, **Akman, Col. 4, Line 32-41; Akman, Fig. 2A**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use address replacement of **Akman** on the method of **Chen** in order to inspect and translate control protocol messages exchanged between nodes on separate IP networks.

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akman in view of Oguchi (US Patent 7,574,522 B2).

As to claim 28, **Akman** substantially teaches a system as set forth in claim 27.

Akman does not explicitly disclose the forwarding strategy comprises forwarding the message to the SP according to the destination address of the message.

However **Oguchi** teaches a forwarding strategy comprises forwarding a message to a SP according to the destination address of the message (*a default route is set so that each of the routers within the private address domain forwards all the packets of which destination addresses are other than within the Intranet to the NAT router*, **Oguchi, Col. 1, Line 54-60**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use forwarding strategy of **Oguchi** on the system of **Akman** in order to keep a confidentiality of the local intranet and to block an interference from outside.

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen modified by Akman as applied to claim 8 above, and further in view of Oguchi.

As to claim 21, **Chen-Akman** substantially teaches a method as set forth in claim 8.

Chen-Akman does not explicitly disclose the forwarding strategy comprises forwarding the message to the SP according to the destination address of the message.

However **Oguchi** teaches a forwarding strategy comprises forwarding a message to a SP according to the destination address of the message (*a default route is set so that each of the routers within the private address domain forwards all the*

packets of which destination addresses are other than within the Intranet to the NAT router, **Oguchi, Col. 1, Line 54-60**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use forwarding strategy of **Oguchi** on the method of **Chen-Akman** in order to keep a confidentiality of the local intranet and to block an interference from outside.

Response to Arguments

13. Applicant's arguments with respect to claims 1, 8 (Note claim 8 depends on claim 1), 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUOLEI ZONG whose telephone number is (571)270-7522. The examiner can normally be reached on 8:30 AM - 6:00 PM, 5-4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WING F. CHAN can be reached on (571)272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. Z./
Examiner, Art Unit 2441

/Wing F. Chan/
Supervisory Patent Examiner,
Art Unit 2441

12/8/2009